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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,397	09/26/2005	Young-Min Choi	AB-1408 US	2205

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EXAMINER

BRIGGS, NATHANAE L

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/521,397	Applicant(s) CHOI ET AL.	
	Examiner Nathanael Briggs	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/14/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

2. Claim 10 is objected to because of the following informalities: The phrase "facing the first insulating substrate" appears alone, and seems to be referring to the phrases thereafter. The addition of a colon or other indicating mark is suggested to clarify the intent of the phrase. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Song et al. (US 6,710,837).**
5. Regarding claim 1, Song discloses a liquid crystal display (LCD; see figures 12, 17, 19A-E, and 20A-D, for instance) having a first insulating substrate (10); a gate line (210) formed on the first insulating substrate (10); a gate insulating layer (220) formed on the gate line (210); a data line (column 12, lines 4-5) formed on the gate insulating

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layer (220); a passivation layer (220) formed on the data line (column 12, lines 4-5); a pixel electrode (200) formed on the passivation layer (220); a second insulating substrate (20) facing the first insulating substrate (10); a common electrode (130) formed on the second insulating substrate (20); a first domain partitioning member (170) formed on at least one of the first (10) and the second (20) insulating substrates; and a second domain partitioning member (250) formed on at least one of the first (10) and the second (20) insulating substrates and partitioning a pixel region into a plurality of domains along with the first domain partitioning member (column 11, lines 3-6), wherein width of the domains is equal to or less than 30 microns (column 11, lines 38-40). Claim 1 is therefore unpatentable.

6. Regarding claim 2, Song discloses the LCD of claim 1 (see figures 12, 17, 19A-E, and 20A-D, for instance), wherein the width of the domains is equal to or less than 28 microns (column 11, lines 38-40). Claim 2 is therefore unpatentable.

7. Regarding claim 3, Song discloses the LCD of claim 2 (see figures 12, 17, 19A-E, and 20A-D, for instance), wherein the width of the domains is equal to or less than 22 microns (column 11, lines 38-40). Claim 3 is therefore unpatentable.

8. Regarding claim 4, Song discloses the LCD of claim 3 (see figures 12, 17, 19A-E, and 20A-D, for instance), wherein the width of the domains is equal to or less than 17 microns (column 11, lines 38-40). Claim 4 is therefore unpatentable.

9. Regarding claim 5, Song discloses the LCD of claim 1 (see figure 4A, for instance), wherein the first domain-partitioning member (4) includes a cutout provided at

the pixel electrode (15) and the second domain partitioning member (4) includes a cutout provided at the common electrode (25). Claim 5 is therefore unpatentable.

10. Regarding claim 6, Song discloses the LCD of claim 5 (see figures 4A, 12, 17, 19A-E, and 20A-D, for instance), wherein the width of the second domain partitioning member (270) is equal to or less than 24 microns (column 8, lines 55-57). Claim 6 is therefore unpatentable.

11. Regarding claim 7, Song discloses the LCD of claim 6 (see figures 12, 17, 19A-E, and 20A-D, for instance), wherein the width of the second domain partitioning member (270) is equal to or less than 5 microns (column 8, lines 55-57). Claim 7 is therefore unpatentable.

12. Regarding claim 8, Song discloses the LCD of claim 1 (see figures 12, 17, 19A-E, and 20A-D, for instance), wherein extension of the domains makes an angle of 45 degrees or 135 degrees with the gate line (210). Claim 8 is therefore unpatentable.

13. Regarding claim 9, Song discloses the LCD of claim 1 (see figures 12, 17, 19A-E, and 20A-D, for instance), wherein the data line (column 12, lines 1-5) has a triple-layered structure including an amorphous silicon layer (220), a doped amorphous silicon layer (240), and a metal layer (200). Claim 9 is therefore unpatentable.

14. Claims 10-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishikawa et al. (US 7,119,870).

15. Regarding claim 10, Nishikawa discloses an LCD (see figures 4, 6 and 16, for instance) having a first insulating substrate (10); a gate wire (51) formed on the first insulating substrate (10) and including a gate line (55), a gate electrode (11) connected

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to the gate line (55), and a gate pad connected to the gate line (55); a storage electrode wire (52) formed on the first insulating substrate (10) and including a storage electrode line (52) and a storage electrode (53) branched from the storage electrode lines (52); a gate insulating layer (12) formed on the gate wire (11) and the storage electrode wire (52); an amorphous silicon layer (13) formed on the gate insulating layer (12); a contact layer (14) formed on the amorphous silicon layer (13); a data wire (54) formed on the contact layer (14) and including a data line (54) intersecting the gate line (55), a data pad connected to the data line (54), a source electrode (13s) connected to the data line (54) and located adjacent to the gate electrode (11), and a drain electrode (13) located opposite the source electrode (13s) with respect to the gate electrode (11); a passivation layer (17) formed on the data wire (54); a pixel electrode (19) formed on the passivation layer (17), connected to the drain electrode (16), and having a first cutout pattern (93); facing the first insulating substrate (10): a black matrix (32) formed on the second insulating layer (30) and defining a pixel area; a color filter (31) formed on the pixel area; and a common electrode (34) formed on the color filter (31) and having a second cutout pattern (36), wherein the width of the second cutout pattern (36) is equal to or less than 24 microns (column 8, lines 48-51). Claim 10 is therefore unpatentable.

16. Regarding claim 11, Nishikawa discloses the LCD of claim 10 (see figures 4, 6 and 16, for instance), further comprising a liquid crystal layer (21) interposed between the first insulating substrate (10) and the second insulating substrate (30), wherein liquid crystal molecules (21) included in the liquid crystal layer (21) are aligned perpendicular

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to the first insulating substrate (10) in absence of electric field (column 8, lines 7-10).

Claim 11 is therefore unpatentable.

17. Regarding claim 12, Nishikawa discloses the LCD of claim 11 (see figures 4, 6 and 16, for instance), wherein the width of the second cutout pattern (36) is equal to or less than 5 microns (column 8, lines 49-51). Claim 12 is therefore unpatentable.

18. Regarding claim 13, Nishikawa discloses the LCD of claim 11 (see figures 4, 6 and 16, for instance), wherein the width of the first (93) and the second (36) cutout patterns is equal to or less than cell gap of the liquid crystal layer (21). Claim 13 is therefore unpatentable.

19. Regarding claim 14, Nishikawa discloses the LCD of claim 11 (see figures 4, 6 and 16, for instance), wherein the first (93) and the second (36) cutout patterns partition a pixel region into a plurality of domains (column 11, lines 4-7), and the width of the domains is equal to or less than 28 microns (column 8, lines 7-10). Claim 14 is therefore unpatentable.

20. Regarding claim 15, Nishikawa discloses the LCD of claim 14 (see figures 4, 6 and 16, for instance), wherein the width of the domains is equal to or less than 22 microns (column 8, lines 7-10). Claim 15 is therefore unpatentable.

21. Regarding claim 16, Nishikawa discloses the LCD of claim 15 (see figures 4, 6 and 16, for instance), wherein the width of the domains is equal to or less than 17 microns (column 8, lines 7-10). Claim 16 is therefore unpatentable.

22. Regarding claim 17, Nishikawa discloses the LCD of claim 11 (see figures 4, 6 and 16, for instance), further comprising an overcoat (33) interposed between the color filter (31) and a common electrode (34). Claim 17 is therefore unpatentable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathanael Briggs whose telephone number is (571) 272-8992. The examiner can normally be reached on 8:30 AM to 5:00 PM (EST) Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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11/7/2006


ANDREW SCHECHTER
PRIMARY EXAMINER